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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/304,523	05/04/1999	SHUNPEI YAMAZAKI	07977/046002	9801

20985 7590 12/10/2001
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EXAMINER

KUNEMUND, ROBERT M

ART UNIT	PAPER NUMBER
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1765

DATE MAILED: 12/10/2001

14

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/364,523

Applicant(s)

Yamazaki

Examiner

Kuremura

Group Art Unit

1765

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Response

A SHORTENED STATUTORY PERIOD FOR RESPONSE IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a response be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for response is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to respond within the set or extended period for response will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on _____.
- ☒ This action is FINAL.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 7 to 30, 37 to 44 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☒ Claim(s) 25 to 30, 43 and 44 is/are allowed.
- ☒ Claim(s) 7 to 24, and 37 to 42 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) _____.
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☐ Interview Summary, PTO-413
- ☐ Notice of References Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other _____

Office Action Summary

Response to Applicants' Arguments

Applicant's arguments filed October 9, 2001 have been fully considered but they are not persuasive.

Applicants' argument concerning the prior art is noted. However, the reference does in fact teach the use of a vacuum chuck during the irradiation of the silicon wafer. The reference does teach that this is done in order to hold the wafer in place. Therefore, there is motivation, which is found in the prior art to modify the process of the Imahashi et al reference. It would have been obvious to one of ordinary skill in the art to hold the wafer as flat as possible in order that the scan by the laser be uniform, and the prior art does teach the want to get a uniform scan.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

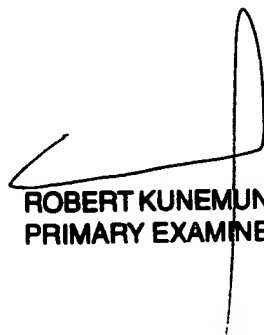
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert M Kunemund whose telephone number is 703-308-1091. The examiner can normally be reached on 8 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ben Utech can be reached on 703-308-3636. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3599 for regular communications and 703-305-3955 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1193.

RMK
October 22, 2001



ROBERT KUNEMUND
PRIMARY EXAMINER

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The Rejections

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 7-24 and 37 to 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Imahashi in view of Celler et al. .

Imahashi et al. teaches (col. 5 lines 10-23 and 34) a method for manufacturing an LCD device, comprising the step of: forming a semiconductor (amorphous silicon) film over a substrate having an insulating upper surface (glass substrate); and irradiating (crystallizing by heating) the semiconductor film with an excimer laser beam having a cross section which is elongated in one

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direction (rectangular cross section), while relatively moving the substrate (holding the substrate with a vacuum chuck) during transport (col. 7 line 13, also col. 1 and 2.

Imahashi et al. does not teach vacuum- holding the lower surface of the substrate in contact with the flat surface of the stage during irradiation. Seller et al. teaches vacuum-holding the lower surface of the substrate in contact with the flats surface of the stage during irradiation (i.e, holding the substrate with a vacuum chuck during laser irradiation, col. 6 lines 39-40). Because it would have been convenient to do so, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to combine the teachings of seller et al. with those of Yamachiche et al. So as to hold the substrate during laser irradiation with a vacuum chuck.

Imahashi et al. does not teach that the vacuum chuck comprises a stage having a flat surface, and at least one suction inlet, and operates in such a manner that the lower surface of the substrate is in contact with the flats surface of the stage. However, since Imahashi et al. Teach the method claimed, under the principle of inherence the invention is considered to be anticipated in this regard by Imahashi et al. as evidence tending to show inherency, it is noted that a vacuum chuck must embody these properties if it is to be used effectively.

Imahashi et al. does not teach flattening the substrate. However, since Imahashi et al. Teaches the method claimed, under the principle of inherence the invention is considered to be anticipated in this regard by Imahashi et al. As evidence tending to show inherence, it is noted that

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any substrate held successfully by a vacuum chuck must tend to flattened by the pressure difference.

Imahashi et al. does not teach irradiating the crystallized semiconductor film (claims 19-24, 41 and 42). Seller et al. teaches irradiating the crystallized semiconductor film Col.6 lines 28-29). Because Seller et al. teaching that this increases mobility (col.1 lines 35-39 and 54-58), it would have been obvious to one of ordinary skill in the art, at the time of the invention, to combine the teachings of Seller et al. with those of Imahashi et al. So as irradiate the crystallized semiconductor film and produce a superior LCD device as an expected result.